

# 2025—WHICH COAST?

*The attributes, qualities and values of the coast cherished over generations can be overwhelmed by neglecting urban areas, spreading faceless sprawl, polluting air, land and water, sacrificing wildlife habitat and agricultural lands, and forgetting our coastal and maritime heritage.*

**What will the Coast be like in the Year 2025 if Current Trends Continue Unabated?**

**Can Careful Planning and Investing Steer the Country Towards a Distinctive, Diverse and Rich Coastal Future?**

## Quality of Life



More people and prevailing settlement patterns will lead to extensive urban sprawl. Upscale developments will greatly limit public access to the shore, and the cost of obtaining public access will

increase. At the same time, these extensive developments will be regularly battered by coastal storms and eroding coastlines that damage private property and public infrastructure. Protecting coastal developments from the ravages of the sea will continue to be subsidized by higher taxes upon all citizens.

Sprawling coastal developments will be only accessible by automobile, though much of the basic infrastructure of roads, bridges, and sewers will be deteriorating. The majority of available commercial services will be provided by uniform national chain retailers, giving coastal communities everywhere a common and predictable look and style.



Settlement patterns will concentrate people and structures in areas that can accommodate them, including traditional population centers and also areas that will benefit from redevelopment.

Fewer developments will continue the costly sprawl that predominates today, which consumes disproportionate amounts of public funds for water and sewer and roads, and also often does not provide adequate open space, public access, and protection for fish, wildlife and natural areas.

All people will be able to enjoy the coast, because their coastal communities will be clean and healthful, and shorelines and vistas will be accessible to the public. Coastal communities will be safe from the ravages of the sea because of improvements in environmental prediction, coupled with planning and mitigating measures. They also will be constructed in ways that are respectful of natural forces, for example the inexorable movement of sand along the shore, and cyclical changes in sea and lake levels. Communities also will demonstrate an abiding respect for their cultural, historic and natural heritage.

## Economic Vitality



Even in the midst of explosive development of pristine coastal areas, there will be large tracts of deserted and underutilized waterfront property, particularly in older urban areas, occupied by contaminated “brown fields.” In other areas, old water dependent industries and activities will have been replaced by high-priced housing and lost to the water-dependent economy. International trade may be diverted from out-of-date, congested US ports to foreign ports and brought into the US via secondary freight handlers, or it may continue to be routed through overburdened US ports at higher risk and economic penalty. Maritime accidents and poor waste handling will continue a steady low-grade infusion of oil and chemical spills into the water. Without new marine decision support systems, this will be accompanied by expensive litigation.



There will be great opportunities for recreation and tourism, including boating and other on-the-water and at-the-beach pursuits. U.S. marine transportation will be safe and competitive, and the ports will be modern and efficient. Energy and mineral resources will be exploited safely and where it makes sense to do so. Fisheries will be utilized at levels that can be sustained into the future. Coastal agriculture and aquaculture will contribute to economic opportunity, add healthful food to the food supply, and contribute to environmental health.

## Environmental Quality



The scenery and values that draw people to the coasts will be lost as water quality will have deteriorated seriously due to unchecked non-point source pollution, lost and degraded habitats and ecological integrity, mushrooming invasions of exotic species, chemical spills, and even poorly designed aquaculture operations, even though contamination from specific toxic chemicals will have leveled off. Many opportunities for quality recreational activities will be lost along the coast due to environmental problems, and tourism will shift to other areas. Only a small portion of the nation’s coastal wetlands will remain. Fisheries will be lost due to poor water quality, loss of essential fish habitat, haphazard management, and other factors. Large areas of coastal waters will be depleted and characterized by a poverty of resources. Many shell fisheries will be closed. The water itself will be a health hazard in many locations and harmful algae blooms will be regular occurrences.



Beautiful wild places along America’s coasts will be protected and accessible. Fish and wildlife will be abundant. Coastal waters in 2025 will exceed the statutory standard of fishable and swimmable by also being inviting and healthful. Moreover, fish from coastal waters will be abundant, and free from contamination or taint. Coastal habitats will be protected through comprehensive planning and growth management decisions based on sound scientific information.

Environmental information will be widely available and routinely used for management purposes by coastal and maritime communities. Successful communities in 2025 will protect the environment, even as they progress economically.

## Responding to Change



All of this will contribute to deeply changed social structures in coastal communities, with a high degree of socio-economic segregation.

Poorer areas will bear a large burden of environmental disturbance and many traditional water-related activities will disappear. Conflict within communities over resource issues will be common. Many locations will depend on highly seasonal and insecure employment patterns. Institutions will be slow to adapt to the challenges posed by changing demographics and cultural diversity.

Much of the money spent and effort made over the previous 50 years to stem the tide of deterioration will have been overtaken. Relationships across sectors needed to undertake creative solutions will be damaged. Responsibility for the state of affairs will be highly fragmented with no clear line of authority to address the situation with locations vying against each other for scarce resources. Development regulations will be highly variable amongst local jurisdictions. Needed economic development projects, for example port improvements will require tremendous dedication of time and money to move along. Many opportunities and options that were once available will be lost.



Coastal activities of all kinds will be guided by practical working guidelines and codes of practice, based on knowledge of coastal processes, environmental and economic trends, and social values. These will represent the work of the best minds from professional associations, industrial organizations, environmental organizations, federal and state governments. Community policies, planning, and projects will benefit greatly from the application of the standards.

The ability and will to do these things will result in part from deliberate state and federal efforts to strengthen the capacity—at every level—to manage the coasts. This includes developing knowledge and applications for resource management, training and employing resource managers with the skills to develop and apply the knowledge, helping diverse public and private organizations forge productive partnerships, and learning how to promote public awareness and obtain community buy-in of coastal goals.

Management efforts at every level will be inclusive and sensitive to the needs of the full range of stakeholders. Coordination and partnership will be their hallmark. Through advances in communications, information, management and modeling interested publics will be well informed of the consequences of decisions. Consultation early and often will be the norm and not the exception. All Americans will practice a stewardship ethic.

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These alternative futures are starkly different. One is bleak, yet the elements represent possible trajectories of current trends that will require dedicated attention and resources to reverse. The other is characterized by enlightened planning and investment, but could trample upon some of our most cherished freedoms and values. Whatever the outcome, U.S. coastal and maritime communities in 2025 will continue to demonstrate great diversity in their quality of life, economic vitality, environmental quality, and their responses to change. While much of the energy that has been directed over the past twenty-five years to manage the coasts will continue, increasing pressures require redoubling, and perhaps realigning, efforts to sustain coastal and maritime communities for future generations.



## Coastal Futures

### Vision

Population growth and additional settlement will be accommodated without compromising the environmental values that draw people to the coast in the first place. Public investment for roads, sewers, and other infrastructure will be channeled into areas that are best able to accommodate growth without deleterious environmental impacts. Planning and design guidelines, reflecting solid science and engineering, will ensure that developments are environmentally compatible and structurally safe, and that they are respectful of historical and cultural values of communities. Water-dependent uses will be favored in community planning and zoning, to protect access to the water, promote diversity and conserve traditional uses. New developments will pay for themselves.

**Partners' Goal:** *Every community will have the authority and means to implement a master plan that provides a blueprint for managing and directing growth. Federal and state laws concerning clean water and air, and the management of coastal, marine and estuarine resources and areas will be coordinated with community master plans, and will be fully funded and enforced.*

### Objectives

1. The federal government will provide funding and technical assistance for preparing and implementing coastal community master plans.
2. Community master plans will employ mixed use zones, urban growth boundaries, and walkable transportation alternatives to promote compact development. Sewers will be required in areas of concentrated development. Master plans will promote adjacent, contiguous development and discourage leapfrog sprawl. They will incorporate provisions for public access to the shore, include designated maritime and working waterfront zones where supported by the community, provide housing for a range of income groups, and show respect for community history and culture. Priority will be given



*The Deer Island sewage treatment facility in Boston, MA.*





## Coastal Futures

to redeveloping obsolete “brownfield” industrial areas and underutilized waterfronts.

3. National, technical guidelines concerning settlement patterns and building design and construction will be available to community planners and will be incorporated by reference in master plans, thereby ensuring the quality of the plans and the resulting settlement patterns and developments.



*About half of the U.S. population resides in the narrow coastal fringe.*

4. New developments will provide sufficient open space, in accordance with national guidelines. Buffers and other “green infrastructure” will be employed to reduce visual and run-off pollution. New developments will pay for themselves. Communities will employ a set of indicators to measure progress in implementing master plans.

5. Additional incentives will be made available to accomplish federal program goals at state and local levels. The incentives will be coupled with indicators of progress at local and state levels to remain eligible for federal funding assistance.

6. The federal government (working with state and local partners) will establish processes and take the initiative to coordinate the implementation and enforcement of its laws with community master plans.

7. Federal programs will acknowledge changing demographics and diversity within coastal communities. Federal assistance will be made available to communities suffering dislocation as the result of dramatic shifts in settlement patterns, for example as a consequence of illegal immigration or disenfranchisement of industry.



## Coastal Futures

### Vision

Every community will have its own unique feel and flavor that reflect its heritage, traditions and diversity. Cultural heritage and diversity will be protected and perpetuated through the master planning process. Historic buildings and structures will be preserved. Traditional occupations and trades will flourish where they have community support. Diversity will be honored. New cultural resources will be accepted and incorporated over time.

**Partners' Goal:** *Conserve the built environment, culture and history that lends character and defines the community.*

### Objectives

1. Historic preservation and cultural conservation to conserve and develop the unique character of each community, and to develop a sense of place, will be a central tenet of comprehensive planning, and will be addressed specifically in community master planning.
2. National, technical guidelines concerning historic preservation and cultural conservation will be available to community planners and will be incorporated by reference in master plans, thereby ensuring the quality of the plans and the resulting preservation and conservation efforts.
3. Historic buildings and structures will be preserved.
4. Working waterfronts will be retained.
5. Communities will make special efforts to conserve artifacts, special places, and institutions.



*A traditional plank canoe (tomol) of the native Chumash tribe "cruises" near a NOAA research vessel in the Channel Islands of California.*





## Coastal Futures

### Vision

Coastal hazards encompass both man-made hazards and natural hazards. Man-made hazards refer to spills and similar environmental calamities. Natural hazards encompass local events, such as coastal flooding, and also global-scale changes such as sea level rise. For both of these kinds of hazards, improvements in knowledge of environmental phenomena, and delivery of environmental predictions and services will greatly enhance the capacity to predict, to mitigate and to respond. Technology-based navigation and risk assessment will prevent maritime accidents; the few that continue to occur will be responded to quickly and effectively. Warning systems will provide early notice of extreme weather events and reduce loss of life and damage to property. Planners and managers will use knowledge of environmental phenomena to steer development away from disaster-prone regions and to develop disaster-resistant communities.

Beaches and coral reefs will be protected and managed as a national resource because of their recreational potential, the protection they afford, and their habitat value and aesthetic appeal. Coastal communities will be much more aware of natural hazards, as the result of better information and also deliberate efforts to raise public awareness, and to develop and apply standards, guidelines and plans for activities in hazard-prone regions, consistent with a national shoreline policy. The national approach to flood insurance will be restructured so that inappropriate development and redevelopment are no longer subsidized. Insurance and taxes will be used to encourage safe siting and building practices. Better building codes appropriate to coastal regions will minimize storm damage.

**Partners' Goal A:** *Significantly reduce the loss of life and property due to natural coastal hazards.*

### Objectives for Goal A:

1. Conduct education activities to inform communities about flood prone areas, sea level rise and mapping of coastal hazard prone areas.
2. Produce disaster preparedness plans for communities.
3. Restructure flood insurance program to

*(continued)*



*Coastal destruction after Hurricane Hugo.*



## Coastal Futures

*(Objectives for Goal A, continued)*

reduce incentives for development in flood-prone areas, including barrier islands.

4. Increase warnings to citizens and commerce by 12 hours on the impacts from natural coastal hazards, including surge flooding.

5. Improve building codes to withstand Category III hurricanes and similar coastal hazards.

**Partners' Goal B:** *Maintain recreational beaches for the long-term, employing regional management plans and nonstructural beach restoration or construction methods wherever feasible.*

### Objectives for Goal B

1. Remove structures that interfere with natural sand movements that adversely affect beaches.
2. Those who benefit from beaches will share the costs of beach maintenance.
3. Projects to maintain navigation inlets and channels shall include provisions to maintain the natural movement of sand along the coastal area affected by the project.



*Maintained recreational beach.*





## Coastal Futures

### Vision

Outdoor recreation and tourism will continue to be the most significant water-dependent economic activities in the coastal zone. People will continue to be attracted to the beach and the sea because the environment will be clean and inviting, there will be sufficient open-space for bird watching, beach combing, and boating and fishing, and tourists and boaters will have the access that they need to the beach and the water. The public will be much more aware of ways in which they can help protect the environment for the future by following safe environmental practices in their recreational activities.

**Partners' Goal A:** *There will be great opportunities for coastal recreation and tourism.*

### Objectives for Goal A

1. Coastal developments will provide for public access.
2. Communities will provide public access to their waters and their beaches.
3. A national system of water and beach quality monitoring will provide a variety of indexes and alerts to assure the public of the health of recreational waters.
4. A national network of protected coastal areas will ensure sufficient open space and diversity of coastal resources for quality recreation and tourism experiences.
5. Enforcement authorities of local, state and federal governments will be coordinated to ensure the best possible recreational experiences for all. This pertains to environmental compliance, resource management, enforcement of guidelines and standards concerning public access, resolution of user conflicts, and also safety on the water.
6. A long-term, national public awareness campaign will educate the public about coastal resources and human impacts, and promote awareness and adoption of best recreation and tourism practices.

**Partners' Goal B:** *Renewed and restored historic and culturally diverse waterfront communities (working waterfronts) will be attractive and economically important tourism destinations.*

### Objectives for Goal B:

1. Traditional, working waterfronts, and associated historical buildings and structures will be saved or restored.
2. National guidelines will promote best practices for restoring waterfronts and enhancing local diversity and heritage, while providing for tourism.
3. Waterfront restoration efforts will incorporate features to promote tourism, in a manner consistent with the character of the locale, and the national guidelines.



## Coastal Futures

### Vision

Global trade will continue to increase, as will demands on commercial ports to continue to safely and efficiently handle ships and cargoes. The trend towards efficiency and consolidation will continue in shipping, and will lead to increased demand for superports—large, state-of-the-art, dedicated cargo facilities with excellent intermodal connections. A trend towards specialized assets and services, such as high speed cargo shipping, and more use of ferries, will also continue. Channels and berths will be routinely dredged to appropriate depths, and real-time navigation information will be routinely available. Not every commercial port will become a superport. Faced with the need to make massive investments to consolidate, specialize and modernize, there may only be one or two superports on each coast of the US in 2025. Other ports will remain viable as feeder facilities and in niche markets.

Another defining trend will be increasing demand for public access to the water for recreation and leisure. This will include both demand for water access for recreation, and also demand to convert shore lands once used for industrial purposes to other uses, for example revitalized urban waterfronts, marinas, and restored natural areas. Some ports will embrace alternative economic activities, making investments to maximize returns from tourism, recreation and leisure time activities. The loss of industrial waterfront space will become a growing problem for some water-dependent industries in some regions.

**Partners' Goal A:** *The nation will be served by a modern system of safe and efficient ports and waterways, which will be accessible for both commerce and recreation.*

### Objectives for Goal A

1. Every federally authorized channel will be maintained to its authorized depth, and the authorized depths and dimensions of channels will be updated to reflect estimates of risk and the needs of shipping.
2. Every port region will have a long-term dredged material management plan that protects the environment while providing for routine maintenance and also necessary economic expansion. Dredged material will be managed according to the plan.
3. Metropolitan planning organizations will accommodate the transportation, environmental, and land use needs of ports in their comprehensive planning and in their infrastructure investment strategies.



Seattle, WA.



### Objectives for Goal A (cont.)

4. A national system will provide quality-controlled, real-time information on environmental conditions and traffic in commercial waterways, wherever risk analysis indicates that such information will improve safety and efficiency. Waterway traffic will be monitored and actively managed by local and regional systems on the most congested waterways or in the highest risk regions.
5. Insure that commercial vessels entering US ports can utilize real-time navigation information in their operations.
6. Navigation charts serving maritime communities will be updated in near-real-time, or at an interval determined by risk analysis as necessary for safe and efficient operations.
7. Maintain spill recovery capability for 6 hour response to spills impacting maritime communities.

**Partners' Goal B:** *Port regions will promote commerce, and conserve historical and cultural values of the community. They will conserve the traditional right to use the waterways and protect the coastal and marine environment.*

### Objectives for Goal B

1. Remediate obsolete harbors and industrial brown-fields.
2. Promote development in communities that are already developed, or which can sustain additional development.
3. Give priority in regional planning and economic development to preserving traditional waterfront uses and keeping water-dependent industries from being displaced. Similarly, give priority to water-dependent industries and uses when obsolete military facilities are made publicly available.
4. Metropolitan Planning Organizations will meet the intermodal needs of ports for land-side access, through transportation and related modernization investments.
5. Working waterfronts, their associated historic structures and cultural activities will be conserved and restored.
6. Working port regions will provide public access consistent with safety and security.
7. Deliberate efforts will be undertaken to promote public awareness of the economic, environmental and cultural importance of port regions, and the ways in which ports contribute to multiple community objectives, including commerce, tourism, open space, and environmental protection.





## Coastal Futures

### Vision

The history of energy supply has been characterized by increasing diversity of fuels and sources. While energy conservation will continue to grow in importance, petroleum will continue to be the dominant fuel 25 years from now. The percentage that comes from the oceans will be even greater, and the reliance on imports—that is, oil that arrives by ship—will continue. Moreover, 25 years hence, new energy sources from the ocean will begin to enter the mainstream market on a trial basis. These may include petroleum derived from methane hydrate sediments of the deep sea, hydrogen fuels derived directly from seawater, and conversion of useful energy from the thermal and kinetic energy of the ocean. Large-scale energy developments will continue to receive extensive environmental, safety and economic scrutiny. Projects will be welcome additions to the economic base in regions where they pass muster. Clean energy sources—those with the smallest adverse effect on global climate—will begin to have an economic advantage; this is likely to spur the development of direct conversion of ocean energy.

High demand for sand to maintain beaches will cause offshore sand deposits to be managed as public resources. The doctrine of sand rights will have developed, analogous to water rights; it will be illegal to “trap” sand upstream and prevent it from being used downstream.

**Partners’ Goal A:** *Abundant, cheap, clean energy will be produced from the ocean.*

### Objectives for Goal A

1. Large energy projects will continue to be sited and operated where they are technologically feasible, economically and environmentally appropriate, and where they are acceptable to the adjacent communities.
2. Pilot projects will prove the technical and economic viability and environmental acceptability of alternative energy sources, including ocean thermal energy, mechanical (wave and current) energy, mining of gas hydrate sediments and conversion of methane from them, direct conversion of oceanic hydrogen into hydrogen fuels, and cultivation of marine biomass to fix carbon and to produce fuel and other products.

**Partners’ Goal B:** *Sand will be managed as a resource vital to coastal communities.*

### Objectives for Goal B

1. Rights to sand in coastal areas will be clearly established and enforced.
2. Offshore sand resources will be managed by states and the Federal Government, through leases and cooperative agreements, to provide stable sources of supply for maintaining beaches and other purposes, while also protecting the benthic environment.



## Coastal Futures

### Vision

Fish stocks, once threatened by overfishing, environmental degradation and habitat loss, will be restored and managed sustainably. Local stocks will contribute in important ways to the national food supply, and local fishing communities will benefit directly as a result. Farms in coastal regions will minimize soil loss and run-off pollution through extensive use of buffer zones, no-till farming methods, and scientific application of fertilizers and chemicals. Aquaculture will play an increasingly important role, especially when it is community-based, contributes positively to the need for protein, and in some cases restores or maintains wild fish stocks, and employs environmentally benign methods.

**Partners' Goal A:** *Fish stocks will be abundant, healthy and managed sustainably.*

### Objectives for Goal A

1. The status will be known of all stocks fished commercially or recreationally. The sustainable yield of all stocks will be calculated. Maintaining stocks at or below their sustainable yield will be the management objective.
2. All essential fish habitat will be identified and protected, and restored where necessary.
3. Fishing practices that harm essential habitat, or that are wasteful of the resource will be phased out and replaced with alternative technologies and methods.



*Mixed species of rockfish in Cordell Bank, CA*

4. Fisheries management measures may include the designation of "no-take zones" where stocks would be allowed to regenerate. And where biodiversity would be protected.
5. Water quality in fishing regions will be monitored and reported on, on a regular basis. Water resources will be managed specifically to meet community needs. Water quality will be maintained at levels needed to sustain fish stocks.



## Coastal Futures

**Partners' Goal B:** *Commercial and recreational fisheries will be vital economically and culturally to their communities.*

### Objectives for Goal B

1. Regional economic development plans and efforts will acknowledge that commercial and recreational fishing are vital economic and cultural activities, and provide for them in master plans and economic developments.
2. Sustaining traditional fishing communities will be a fundamental tenet of fisheries management. The effect of this will be to favor owner-operator, and family-based fishing operations that are tied to fishing communities.
3. Fishing and marketing practices will maximize the economic value of the catch, by employing selective fishing methods, developing the widest possible markets for the great diversity of food from the sea, and increasing the percentage of fish caught locally that are consumed locally.

**Partners' Goal C:** *Coastal agriculture will contribute to the food supply, while conserving the environment.*

### Objectives for Goal C

1. Agriculture will be protected and promoted in the coastal zone because it protects water quality and stream flows, saves open space and wildlife habitat, and prevents sprawling developments.
2. Agricultural practices that protect the environment will be promoted through public awareness and development of best practices. Where environmentally necessary, measures such as buffer zones along streams and waterways, and no-till farming techniques will be required by agricultural lenders as well as local or regional land use authorities.



*Agriculture is a multibillion dollar industry which can also deliver pollutants in the Monterey Bay area.*





## Coastal Futures

### Vision

Widespread public awareness of coastal issues, their complexity, and responses to them will be an important factor in stewardship of the coastal zone. Public education will provide the basis for this. Communications media will reinforce stewardship messages and disseminate them throughout society.

**Partners' Goal:** *Coastal and urban waterfront communities will be aware of coastal issues, their complexity, and responses to them.*

### Objectives

1. Coastal management professionals and organizations will increase public awareness activities in coastal and urban waterfront communities, with special attention to engaging America's youth during the primary and secondary school years.
2. Integrate awareness activities into research agendas of local educational institutions.
3. Include education components for public awareness as an element of conserved and restored traditional waterfront areas.
4. Provide opportunities for elected officials at all levels to participate in public coastal issue and educational forums.



*Volunteers for the SEALS program conduct research on the harbor seals of the Gulf of Farallones National Marine Sanctuary, CA.*

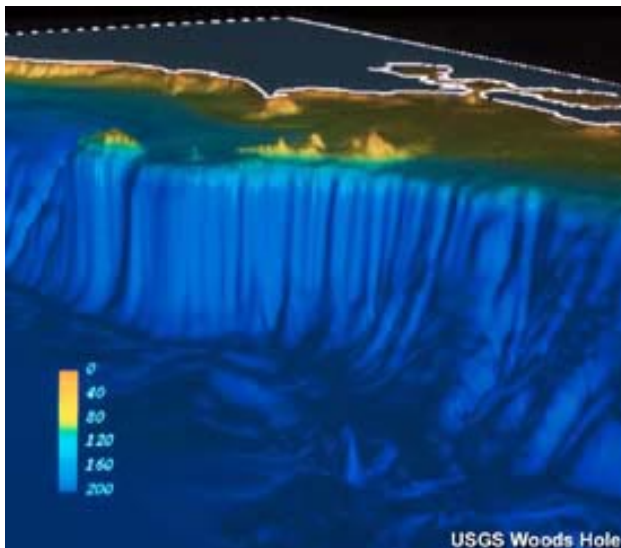


## Coastal Futures

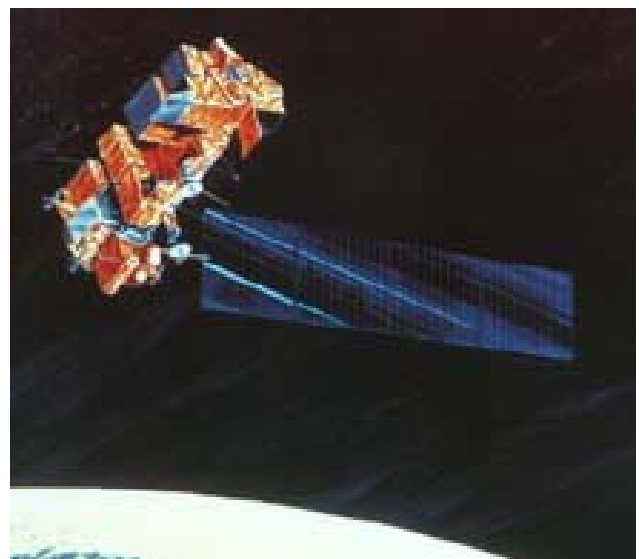
### Vision

Remote sensing, imaging technology, and "smart" instruments will bring new data and ways to present and analyze new information. Modeling and simulation will become important aids to consensus building and decision-making. Communications and information technology will help managers reach out to new constituencies and bring in new ideas.

**Partners' Goal:** *Enabling technologies, such as geographic information systems, remote sensing and imaging, real time environmental monitoring and communications networks, and environmental modeling and simulation will dramatically improve the quality and quantity of information available and utilized for coastal management.*



Computer imagery shows the topography of the seafloor in the Gulf of the Farallones off the California coast.



Imaging technology such as remote sensing via satellite holds great promise for future application to coastal resource management.

### Objectives

1. Seek opportunities to develop and apply new technologies to coastal management challenges.
2. Undertake applied research and development that demonstrates new applications of technology to coastal management.
3. Provide technical assistance to states and communities for better access to and use of new technologies.



## Coastal Futures

### Vision

Coastal communities will respond to pressures with more reasonable, less adversarial management approaches. These will typically involve focused, regional public and private efforts that harness the knowledge, experience, capabilities and authorities of private industry and environmental organizations, as well as government at every level. These partnerships will, in general: (1) have a regional or ecosystem focus, (2) be based on sound science and engineering, including information from real-time environmental monitoring, and (3) involve extensive collaboration between public and private interests and across all levels of government. They will rely, to the greatest extent possible, on the participation of the widest range of stakeholders, including every level of government, with their conservation and economic development tools; the private sector, that is capable of great innovation in every area; and the knowledge base and technical applications provided by scientists and engineers. These advances in management will contribute to major advances in habitat protection and restoration, fisheries management, hazard mitigation, watershed management, and safety and efficiency of the marine transportation system. Progress will be monitored through an established set of national indicators.

**Partners' Goal A:** *Coastal and maritime communities will have the technical capacity to plan for the future, and to achieve the objectives that they set for themselves.*

### Objectives for Goal A

1. Technical standards, based on sound science and engineering, and widely available and understood will help communities manage growth. Standards will address prevention and mitigation of hazards, minimization of environmental impacts, conservation of local heritage, and the full range of subjects that need to be addressed in comprehensive community planning. The development and dissemination of technical standards will constitute a national effort involving federal, state and local governments, professional societies, industry, academia and community organizations.



*Scientists routinely survey intertidal sites on the Gulf of the Farallones National Marine Sanctuary, CA.*

2. A national program of education and training will help build the capacity of communities, and local and regional interest groups to participate in comprehensive coastal planning and growth management efforts.

3. Enforcement of local, state and federal laws and regulations will be coordinated with community master plans.





### Objectives for Goal A (cont.)

4. A set of indicators of community coastal health will be developed nationally and employed by communities as a self-help tool to guide their planning and management efforts.
5. Environmental simulations will be used routinely to inform planning and management efforts, and to build consensus.

**Partners' Goal B:** *Management will be community based, participatory and transparent*

### Objectives for Goal B

1. Every community will have a comprehensive plan that directs growth and insures its quality.
2. Decisions concerning growth will continue to be made in the marketplace.
3. Coastal developments will be self-sustaining without direct or indirect subsidies.
4. Market forces will be harnessed in the process of growth management. Innovative techniques will be routinely employed to protect property rights while achieving environmental objectives for coastal communities.
5. Economic solutions to environmental problem solving will be the solutions of choice as an alternative to regulation.
6. A national plan will guide development and conservation of the vast ocean areas under federal jurisdiction (Exclusive Economic Zone).



*Students learn more about the marine environment through the Channel Islands National Marine Sanctuary floating classroom, CA*